

Citation for published version:

Velleman, R 1992, 'Intergenerational effects - a review of environmentally oriented studies concerning the relationship between parental alcohol problems and family disharmony in the genesis of alcohol and other problems. I: The intergenerational effects of alcohol problems', *Substance Use & Misuse*, vol. 27, no. 3, pp. 253-280. <https://doi.org/10.3109/10826089209068741>

DOI:

[10.3109/10826089209068741](https://doi.org/10.3109/10826089209068741)

Publication date:

1992

Document Version

Peer reviewed version

[Link to publication](#)

University of Bath

Alternative formats

If you require this document in an alternative format, please contact:
openaccess@bath.ac.uk

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

To cite this Article:

Velleman, Richard (1992) 'Intergenerational Effects - A Review of Environmentally Oriented Studies Concerning the Relationship between Parental Alcohol Problems and Family Disharmony in the Genesis of Alcohol and Other Problems. I: The Intergenerational Effects of Alcohol Problems', *Substance Use & Misuse*, 27: 3, 253-280.

To link to this Article: DOI: 10.3109/10826089209068741

URL: <http://dx.doi.org/10.3109/10826089209068741>

Intergenerational Effects -A Review of Environmentally Oriented Studies Concerning the Relationship between Parental Alcohol Problems and Family Disharmony in the Genesis of Alcohol and Other Problems. I: The Intergenerational Effects of Alcohol Problems

Richard Velleman, BSc, MSc, PhD, AFBPS, CPsychol

*School of Social Sciences
University of Bath
Bath, Avon BA2 7AY, United Kingdom*

Abstract

This paper is the first in a two-part series. In this paper the literature on the intergenerational transmission of alcohol problems is reviewed from an environmental perspective. It is concluded that there are effects of problem drinking on children, but that the long-term effects of parental problem drinking on the offspring once they reach adulthood are not so well documented. It is suggested that whether or not intergenerational continuities are found depends largely upon the source of the sample, that very little is known about adulthood outcomes other than drinking status, and that there is a striking sex bias in the literature, with most research examining the effects of problem-drinking fathers upon their male offspring. Possible mechanisms whereby parental problem drinking could affect adjustment are outlined and discussed. The notion of disturbed family relationships acting as a possible mediator for the transmission of problems is raised.

Keywords. Intergenerational, Transmission; Alcohol problems; Environmental

INTRODUCTION

Robert Niven, a previous Director of the National Institute on Alcohol misuse and Alcoholism in the USA, said in an interview at the time that "It is estimated that there are

currently 7 million children of alcoholics under the age of 20 in the United States and many more million adult children of alcoholics" (Niven, 1984, p. 3). A report prepared by members of the New York State Division of Alcoholism and Alcohol misuse in conjunction with the Children of Alcoholics Foundation (Russell et al., 1985) provides a similar estimate of the number of children of problem drinkers: 6.5 million young people under the age of 18 and some 22 million adults over that age, which is one in every eight Americans. Given these figures, it is not surprising to find that there has been a large amount of research examining the possible ill-effects on these offspring of having such a parent.

This research will be examined below. There are, however, three problems which should be raised at the outset. The first concerns sex biasing in the sampling. As will soon become apparent, almost all the research has been conducted examining the effects of fathers' drinking on sons, with very little examining either the effects of mothers' drinking (except on the fetus) or any differential effects on daughters rather than sons.

The second problem concerns terminology. The terms "alcoholic" and "alcoholism" are becoming less common now, both because of the underlying medical model philosophy associated with them and because of the fact that almost every researcher uses a different definition of what constitutes "alcoholism." This then leads to a false impression that, when two papers discuss the impact of parental "alcoholism" on the offspring, they are in fact writing about the same thing. A similar problem arises when researchers use the term "heavy drinking": what constitutes "heavy" is hugely subculture-dependent, and few writers define their terms by giving precise amounts, frequencies, etc. to allow comparisons. As an example, consider the paper by Parker and Harford (1987) described later in this review. They write "respondents . . . were asked to describe each parent as nondrinker, light drinker, moderate drinker, heavy drinker or very heavy drinker. We do not know how our respondents decided that their parents were heavy or very heavy drinkers" p. 266). This review, therefore, avoids the use of these terms when commenting on research, although the terms used in the original publications will be used when the research is described.

The third problem concerns when the offspring are studied. As will be outlined below, the vast majority of the research has been concerned with examining the immediate effects (if any) during childhood of having a parent with a drinking problem, and correspondingly less research effort has been spent in examining the adulthood outcome of these children. Much of what has been written about these children's adulthood outcome is at an anecdotal or journalistic level (e.g., Miller and Tuchfeld, 1986), and even the limited amount of empirical research which has examined this adulthood outcome is flawed, with the overwhelming majority of reports having been collected using samples of adults who have already been identified by helping agencies as having alcohol problems themselves, and only relatively few reports having come from either community samples or prospective studies.

A. EFFECTS DURING CHILDHOOD AND ADOLESCENCE OF HAVING A PROBLEM DRINKING PARENT

A great deal of research has been carried out on this subject. One of the most major effects noted has been on the developing fetus. Because effects on unborn infants are not central to this review, it will not be examined in any detail, but it is worth noting that drinking at a level above 1 oz of absolute alcohol per day (4 units of alcohol, where 1 unit is equal to one-quarter of an ounce) is associated with a higher level of adverse perinatal outcomes (Rosett and Weiner, 1982); with a small number of babies being affected by "fetal alcohol syndrome" (Jones and Smith, 1973), a syndrome characterized by signs in each of three categories:

growth retardation, central nervous system involvement, and characteristic facial abnormalities.

Other research has examined a range of areas-academic performance, incidence of illness, self-esteem, delinquent behavior, other behavioral difficulties, and so on. Since this work has been reviewed on a number of recent occasions (e.g., Warner and Rosett, 1975; El-Guebaly and Offord, 1977, 1979; Wilson, 1980, 1982; Velleman and Orford, 1984; West and Prinz, 1987; Woodside, 1988; Orford, 1990), it will be summarized only briefly here. In general, the results of this work have been to build up a remarkably consistent picture suggesting that parental alcohol problems produce a high risk in children of a wide variety of emotional and behavioral disorders. Many of the commonly reported problems concern antisocial behavior and conduct disorder problems (rather than anxiety, depression, or “neurotic” behavior), with delinquency, truancy, aggressive behavior, hyperactivity, and temper tantrums all being reported as being more common among children of problem drinkers.

A second set of problems concerns the school environment, with learning difficulties, reading retardation, conduct and aggressive behavior problems, poor school performance, and a general loss of concentration all being frequently reported. For example, a recent prospective study (Knop et al., 1985) of all children born in Copenhagen in 1959- 1961 found a sample of 233 boys with “alcoholic” fathers (although no information is given about mothers’ alcohol usage). The study then compared them with a group of 107 control boys on measures derived from school reports and teacher ratings obtained retrospectively from the last school attended. They found that these “high risk” children had significantly more often repeated a school year, been referred to a school’s psychologist, attended a larger number of schools, and were significantly more likely to be rated by teachers as more “impulsive-restless” (being especially high on fidgeting, restlessness, and confusion) and less “verbally proficient” (especially on vocabulary, reading ability, and oral expression). In conjunction with these studies on school performance, it should be mentioned that Wilson (1982) warns that “lack of comparison groups makes it difficult to say whether these are more common among children of ‘alcoholics’ than among children from other homes where there is marital conflict and family disruption” p. 162).

A third area concerns emotional problems, psychological disturbance, negative attitudes toward the problem drinking parent and toward the parents’ marriage as a whole, and psychosomatic complaints. These are again reported by many workers, but again Wilson warns that “there is an urgent need for comparative research on children in families experiencing other forms of crisis; similar patterns of family dysfunction may operate in families disrupted by events such as unemployment, mental and physical illness or bereavement” (p. 162).

Although it is almost universal in studies of young children of problem drinking parents to find some ill effects, the situation with adolescents is somewhat more equivocal. This is not unduly surprising given the findings from studies of normative behavior (Aitken, 1979; Davies and Stacey, 1972) which show a general trend for parental influences to lessen as children grow older, and for adolescents’ behaviour to become gradually more responsive to peer group pressures.

It is clear that having a parent with a drinking problem raises the risk of a child developing one or more of a large range of difficulties. Two things, however, are not clear.

The first is the question of why having a parent with an alcohol problem should lead to the development of these difficulties-what mechanism is responsible for this? Is there a direct causal relationship such that parental alcohol problems cause childhood difficulties in some way, or are there mediating causal variables? For example, El-Guebaly and Offord (1977) point out that a core issue in the studies of offspring of problem drinkers is whether the most significant contribution to risk is the parental drinking problem itself or the social and familial disorganization often associated with both poverty and alcohol problems.

The second thing which is not clear is what the long-term effects are on adult adjustment of having a parent with a drinking problem. It is often assumed that disturbance in childhood automatically leads to disturbance in adulthood, and the evidence reviewed above coupled with the evidence to be presented in the next section from retrospective reports of current problem drinkers is often taken to imply such long-term effects do OCCUR. Yet a major problem with the literature is that it generally looks at the adjustment problems of offspring when they were children, with very little follow-through to determine whether these disturbed children become maladjusted adults. Often the results of studies of offspring as children are projected forward to show that these children are generally at risk Yet as Heller et al. (1982) argue in their paper on "Problems associated with risk overprediction in studies of offspring of alcoholics," "while it can be granted that growing up in the home of an alcoholic parent can produce problems for the child, it would seem that the most crucial question is whether there are any residual effects associated with these earlier difficult years. Given the disequilibrium and inconsistency likely to be present in the home of a parent with a drinking problem, it would not be surprising to discover negative effects on offspring as children. More crucial is information which might indicate whether problems noted early in development persevere into adulthood" (p. 190).

The issue of long-term effects will be examined now, and this review will return to the question of possible mechanisms in a later section.

B. ADULT ADJUSTMENT OF CHILDREN OF PROBLEM DRINKING PARENTS: RETROSPECTIVE ACCOUNTS FROM ADULTS WITH DRINKING PROBLEMS

There have been many studies in which adults who are currently defined as having a drinking problem are asked whether one or both of their parents had such a problem (e.g. Penick et al., 1987; McKenna and Pickens, 1981; Rathod and Thomson, 1971; Winokur et al., 1970; Moore and Ramseur, 1960); and Cotton (1979) in her major review of the area examined 36 studies in which the main samples had problems with their own drinking. These studies all show that excessive drinkers are more likely to report having had a parent who had a problem with drinking than would be expected from the incidence figures in the general population. For example, when estimated rates of "alcoholism" in the general population have been compared with those in the families of "alcoholics" (as has been done by Winokur et al., 1970; Reich et al., 1975; and McKenna and Pickens, 1981), it is found that male "alcoholics" are 2.2 times as likely as males in the general population to report having had an "alcoholic" father and 1.6 times as likely to report having had an "alcoholic" mother, and female "alcoholics" are 3.3 times as likely to report having had an "alcoholic" father and 2.4 times as likely to report having had an "alcoholic" mother. In his recent review of the worldwide international literature, Offord (1990) shows that this finding (of excessive drinkers reporting having a problem drinking parent) is not confined alone to research emanating from Britain and North America, and he cites research from Chile (Kattan et al., 1973), USSR (Paschenkov, 1976), Iceland (Helgason and Asmundsdottir, 1975), and Hungary (Laszlo, 1970) which all reach similar conclusions.

A study typical of many others is that by McKenna and Pickens (1981). This study examined 1,930 patients (1,520 men and 410 women) admitted to the Hazelden Rehabilitation Center in Minnesota, USA. The mean age of the men was 40.6, that of the women was 41. All the patients included in this study were categorized as chronic alcoholics by a multidisciplinary team at the Center. 21.7% of the men and 27% of the women reported "alcoholism" in one or both parents, and 3.2% of the men and 6.6% of the women reported that both parents were "alcoholic." This study then went on to relate the number of "alcoholic parents" (0, 1, or 2) with a series of other measures, finding that the children of two "alcoholic parents" were more likely than the children of one "alcoholic" (who were more likely than the children of non-alcoholics) to be younger when first intoxicated, to have had more pre-treatment behavioral problems, and to proceed more rapidly from first intoxication to alcoholism treatment.

There are major problems, however, with this type of retrospective research conducted on samples who already have alcohol problems, due primarily to the respondents' treatment status. First, it is not known how representative problem drinkers are who are hospitalized or in treatment as compared with problem drinkers in the community at large. It is known from general population surveys (e.g., Cahalan, 1970) that the majority of problem drinkers are never treated professionally, and it is possible that the greater representation of parental drinking problems among treated problem drinkers simply reflects these people's greater propensity to seek treatment rather than their greater risk of developing problems. Second, by only examining offspring who are casualties, no information is made available about the percentage of offspring who do well despite parental drinking status. Even if one accepts that having a parental drinking problem does raise the risk of offspring problem drinking in turn, investigating only the casualties of this upbringing does not allow for an accurate assessment of the real degree of risk. Heller et al. (1982), in arguing a similar point, provide an apposite example from the non-alcohol-related literature, citing a study which followed into adulthood children selected in kindergarten and first grade as being "at risk" for emotional disturbance. The investigators (Cowen et al., 1973) found that 68% of adolescents and young adults appearing in a psychiatric case register had been identified as being at risk as young children. They also found, however, that "only 19% of early identified (at risk) children developed sufficiently serious problems to have shown up in the Register" (Cowen et al., 1973, p. 443), leading Heller et al. to summarize: "While the majority of individuals in treatment showed risk markers as children, *the majority of children with risk markers did not require treatment as adults*" (Heller et al., 1982, p. 189, emphasis in the original). The retrospective research using problem drinkers in treatment clearly mimics the sort of study which examines the case register and looks backwards to the "at-risk" status during young childhood, but without knowledge of how frequently this "at-risk" status is found in non-treated individuals, it is not possible to properly interpret the data from these studies of problem drinkers in treatment.

C. ADULT ADJUSTMENT OF CHILDREN OF PROBLEM DRINKING PARENTS: PROSPECTIVE AND COMMUNITY SAMPLES

Whereas there have been a large number of studies using samples of respondents who are already in treatment for their alcohol problems, there are relatively fewer reports of research which has examined respondents drawn either from the community or which have utilized a longitudinal, prospective design. Among the more important prospective studies are those by Rydellius (1981), Nylander and Rydellius (1982), Miller and Jang (1977), and Vaillant (e.g., Beardslee et al., 1986), and among the very few community studies are those by Clair and Genest (1987), Benson (1980), and Orford and Velleman (1990).

Prospective Studies

Longitudinal research is a highly difficult area, replete with potential pitfalls (Baekeland et al., 1975; Balks, 1968; Wall and Williams, 1970). Some of these are: the distorting effects of selective attrition; the distorting effects of selective sampling (e.g., studying only child guidance clinic referrals, Robins, below); measures taken at the outset often becoming irrelevant (or at least less than wholly satisfactory) a generation later; and there are effects upon both researchers and respondents of being repeatedly tested. Besides all these problems, the fact is that longitudinal studies are extremely costly and time consuming, and they require a long-term commitment from both funding agencies and researchers since, as Heller et al. (1982) argue, few researchers "would be prepared to wait, as at-risk children matured, for a period of time which could correspond to their productive lives as researchers!" (p. 195).

Nevertheless, despite all these problems, two sorts of prospective study have been performed: young people already identified in childhood as having problems in some way have been followed up (e.g., Rydelius, 1981; Nylander and Rydelius, 1982; Miller and Jang, 1977; McCord and McCord, 1960, Robins, 1966); and young people for whom there was no reason to think that they were at risk have been studied until adulthood (e.g., Beardslee et al., 1986).

Children with Problems. Two sorts of study are reviewed here. The first sort concerns follow ups of samples drawn from either child guidance clinics or other sources suggesting that the children would be more deviant than general population norms; and the second concerns follow ups of samples of the children of treated problem drinkers.

The Cambridge-Somerville Youth Study (Powers and Witmer, 1951; McCord and McCord, 1960) started in 1935 as an experiment in delinquency prevention, examining the effect of a 5-year counselling program on both "antisocial" and "control" youths. The group of youths was made up of 650 boys (average age: 9 years) "referred by schools, welfare agencies, police, and churches" (McCord and McCord, 1960, p. 6). Half of the boys (N = 325) were "normal" and half (N = 325) "pre-delinquent" (p. 6), although these terms are not rigorously defined - for example, "delinquency prognosis" was assigned on an 11-point scale by a committee of judges who "considered the boy's likelihood of becoming delinquent" (p. 7). Half of each of the two groups were "treated"-i.e., they had the 5-year counselling program, and the other did not. Hence, 325 youths were "treated" and 325 were not. This study was designed to examine the effect of intervention on later deviant behavior, and its results were published in those terms (Powers and Witmer, 1951; McCord and McCord, 1959b). But it was also found that some of both the "predelinquent" and the control boys had alcohol-misusing parents [defined as "their repeated drinking at some time prior to 1945 had interfered with their interpersonal relations or their social or economic functioning. (This might mean they had been arrested for drunkenness at least twice, or) . . . lost jobs as a result of excessive drinking, or received medical treatment . . . for alcoholism, or because marital unhappiness was attributable primarily to their excessive drinking"] (McCord and McCord, 1962, p. 4 15). The fact that some of both groups had "alcoholic fathers" enabled the issue of intergenerational transmission to be investigated (McCord and McCord, 1960, 1962; McCord, 1972). These authors followed up 255 out of the 325 "treated" subjects and found that 29 of their sample had so far developed an alcohol problem, where the existence of such a problem is based on four criteria: "any of the subjects who had been members of Alcoholics Anonymous, who had been referred to a hospital in Massachusetts for alcoholism, who were known as alcoholics by the Boston Committee on Alcoholism or by other social agencies, or who had been convicted by the courts for public drunkenness at least twice were considered

alcoholic" (McCord and McCord, 1962, p. 414). When they examined the status of the parents of these 29 alcohol misusers, they found that 22% of the sons of the 51 alcohol-misusing fathers had become alcohol misusers themselves, as compared to 12% of the sons of the 126 nonalcohol-misusing fathers, a difference which seems large but which is not statistically significant. They also found that 31 % of the sons of 26 criminal fathers as compared to 12% of the sons of 151 noncriminal fathers had become alcohol misusers, a statistically significant result. There are numerous problems with this study - the McCords did not reinterview their subjects, taking all their information from records and public agencies; a disproportionate number of their alcohol-misusing subjects came from the 'predelinquent' group, confusing the issue of parental alcohol-misuse status with the fact that the child was already designated "at-risk" at the start of the study; the authors never separated out the effect of parental alcohol misuse from that of parental conflict and family disharmony; and the study was only conducted with males. These problems imply that one should interpret the Cambridge-Somerville results with some caution, but this should not detract from the fact that the research is one of the few major longitudinal studies which has attempted to examine the intergenerational effects of alcohol misuse.

Robins (1966) followed up 382 boys who were admitted at approximately age 13 to a child guidance clinic some 30 years previously, collecting reliable information on 286 of these men. Robins found that so far 78 (27%) of the sample had developed an alcohol problem at some point in their lives, but that "fathers reported to drink excessively were no more likely to produce alcoholic children than fathers who were arrested, were erratic workers, had deserted, were guilty of sexual misbehavior, or beat their wives or children. Apparently the presence of an antisocial father in the home predisposes a child to excessive drinking whether or not the father sets an example of drinking" (Robins et al., 1962, p. 407). On the other hand, Robins found that the type of referral to the child guidance clinic in the first place was important in determining who would later misuse alcohol, finding that "patients referred for antisocial behavior had a very high rate of excess alcohol intake as adults as compared with other patients or control subjects . . . almost half the men who had been antisocial referrals had some social problems with alcohol, and one-fifth were still having problems at time of follow-up" (Robins, 1966, p. 61). Again problems exist with this study-most of the child guidance referrals were for antisocial behavior, creating a biased and more at-risk population; and due to this, large numbers of the sample went on to develop what Robins terms "sociopathy" as well as alcohol problems, creating problems in separating out clearly distinctive antecedents of alcohol misuse from those of "sociopathy."

Nylander (1979) reports a similar study. 2,164 child guidance *cases* were followed up 20 years later. 123 cases (99 men and 24 women) had developed problems with their alcohol or drug use to the extent of being described as "chronic addicts," which in this study is a term applied relatively rigorously - "a history of addiction covering several years as confirmed by periods of institutionalization at psychiatric hospitals or hospitals specializing in the care of drug addicts where they were officially diagnosed as addicts, or to those who had received treatment over a period of years through repeated contacts with polyclinics for alcoholics or with hospital departments providing care for drug addicts. All of these cases were socially handicapped in the extreme and were incapable of earning a living. . . . This group does not include cases that were registered on a single occasion or only a very few occasions and who functioned socially satisfactorily" p. 25). The average age of the children at the time they made contact with the child guidance clinic was 9 years. Nylander's data shows that "a remarkably large proportion of those who became chronic addicts came from home environments that were very badly disturbed, 42% of the boys and 38% of the girls had

fathers who were alcoholics or who were mentally sick, 29% of the boys and 38% of the girls had mothers who were alcoholics or who were mentally sick, and 60% of the boys and 58% of the girls had parents who were divorced. In the majority of cases, 92% of the boys and 83% of the girls, the symptoms registered (on referral) were of the 'acting-out' type, and at the time of their contact with the clinic 57% of the boys and 33% of the girls were already exhibiting antisocial symptoms (pilfering, theft, absconding, etc.)" (pp. 25-26). Unluckily, Nylander does not allow the reader to separate out the influence of "alcoholism" versus "mental sickness," nor these from the influence of divorce.

Berry (1967; Ricks and Berry, 1970) reported yet another similar study. He followed up 169 boys, aged 11 to 16 at the time they were first seen at a child guidance clinic, to see who later developed alcohol or other problems. In agreement with the previously cited studies, Berry found that boys who later developed alcohol problems were more often referred in the first place for problems concerning "acting out" or aggressive delinquency, and came from homes which were characterized by chaos and disorganization.

These studies-McCord and McCord, Robins, Nylander, and Berry-demonstrate that antisocial youths, coming from homes where parents misuse alcohol and from homes where there exist a number of problems associated with social disadvantage, develop problems with both alcohol use and "sociopathy" more frequently than do comparison subjects. These studies all suffer from the problem, however, that their results were derived from samples that premorbidly exhibited a disproportionate amount of antisocial behavior.

The second group of studies involves following up the children of treated problem drinkers, a group already shown in the first section of this review to be at greatly increased risk of developing problems during childhood. Rydelius (1981) conducted a 20-year follow up, using public records, of the children who were the subjects of another Nylander (1960) study. These children showed a relatively poor adulthood adjustment when compared with a matched control group. The data Rydelius presented show that the sons of "alcoholic" fathers were more likely to have been registered as having alcohol and criminal problems, to have needed social services assistance, to have had more days of sickness, to have made more use of both physical and psychiatric clinics and hospitals, and during their visits to these physical hospitals to have been noted more frequently as showing signs of alcohol misuse and drunkenness. The evidence for poor outcome for daughters is less clear, but they too were more likely to have needed social services assistance, had more days of sickness, made more visits to psychiatric hospitals or clinics for problems with alcohol or drugs, made more visits to physical hospitals and clinics, and during their visits to these physical hospitals to have been noted more frequently as showing signs of alcohol misuse. Daughters were also more likely to have had more children, and sons more changes of domicile. Rydelius reports that the factors in childhood which best correlated with poor adulthood adjustment were symptoms of aggression in the child and signs of neglect in the child such as poor dental status. Certainly the former factor accords with the studies following up child guidance populations suggesting that childhood antisocial behavior is strongly linked to later adulthood alcohol misuse.

A problem with the above study, noted by the author, is that the children originally recruited by Nylander were predominantly from lower social status groups, raising the possibility that these findings are not generalizable to other populations with a different social status. In order to examine this possibility further, Nylander and Rydelius (1982) performed a second study utilizing a follow-back design this time. They selected all the male alcoholics (their

terminology) who had attended a local alcoholism clinic between 1962 and 1967 who a) had children and b) belonged to either the highest or the lowest social strata. This selection exercise created a sample of 90 treated alcoholics, 50 men from the lowest and 40 men from the highest social classes, who between them had 185 children, 85 from the high class families and 100 from the low class ones. These children ranged in age from 5 to 48. They then searched official records for evidence of problematic outcome. Their conclusion is that if the father is a "chronic alcoholic," social class of origin does not affect outcome. "Despite a better social and economic background they get into financial trouble just as often, they are responsible for as many acts of juvenile asocial behavior, and they become criminals and addicts to the same degree as the children with a far worse social and economic background" p. 813).

Again, both these studies suffer from the fact that the sampling might well be biased. The children were selected because their parents were in treatment for their alcohol problems, and numerous problems arise in generalizing from cases in treatment to problem drinkers at large. It is possible that the parent being in treatment might bias the sample in a number of ways. For example, the population of parents may well have had more severe alcohol problems; or they may have suffered more severe consequences of their drinking which might have increased the chances of their being referred to the clinic; or their children might have been exhibiting problems causing the parents to seek help due to their realization of the damage their drinking was doing to the children; or the treatment process might have helped the child label itself as the child of an alcoholic; and so on. As Heller et al. (1982) argue, "the point is that we simply do not know how representative alcoholics who are hospitalized or in treatment are compared with alcoholics, problem, or heavy drinkers in the community at large. Similarly, we do not know the extent of the risk to offspring when parental drinking is untreated" (p. 188).

A final study to be examined is that by Miller and Jang (1977). These authors followed up 259 children reared in lower-class, poor, multi-problem urban families 20 years after their initial selection for the study. 147 of these children "had an alcoholic parent" (p. 23) and 112 of them were controls with no official record of "alcoholism" but "with a similar multiplicity of problems" @. 24). The criteria for categorizing parents as "alcoholics" are not, however, reported. All the respondents were interviewed. Miller and Jang found that 36% of the offspring group as opposed to 16% of the control group drank heavily (defined as drinking five or more drinks per occasion), and that those offspring with alcoholic parents fared less well in terms of mental health problems, marital difficulties of their own, employment, and financial stability. Interestingly, this study is one of the few that separated out the effects of paternal versus maternal "alcoholism." Their findings are shown in Table 1, and they imply that having both parents "alcoholic" heavily increases the offspring's chances of being a "heavy drinker"(it doubles the chances for daughters), having only the father "alcoholic" increases the chances of offspring of both sexes being a heavy drinker (although not by much), and having a mother who is an "alcoholic" slightly lowers the chances of a son being a heavy drinker but increases threefold the chances of a daughter being a heavy drinker. Again, however, the sample was taken from the most extreme clinical cases, the report suffers from lack of definition and lack of detail (for example, the numbers of offspring with both parents, mothers, and fathers who were alcoholic are never given), and yet again the authors never separate out the effects of parental alcohol misuse from that of conflict and disharmony.

TABLE 1 ABOUT HERE

Young People for Whom There Was No Reason to Think They Were at Risk.

The most important prospective study in this category is that by Vaillant (1983; Beardslee et al., 1986; Drake and Vaillant, 1988). They report on a 40-year prospective study of working-class families in which more than 170 men with one or more "alcoholic" parents were compared with over 230 men without an "alcoholic" parent. They found that the degree of exposure to "alcoholism" in childhood (as assessed on a 15-point scale created by including all material collected originally on the child and his family until age 17-direct interview material, family interviews, school records, psychological tests) was significantly correlated with later life alcohol use ($z = 0.22$), alcoholism ($z = 0.21$), "sociopathy" ($t = 0.17$), and death by the time of the 40-year follow-up ($z = 0.18$). However, they also found that most of this impairment occurred in those subjects who actually developed "alcoholism"; when these subjects were eliminated from the data analysis, there were no significant differences between the two pups. This finding led the authors to conclude that there existed "considerable resiliency in terms of overall functioning, in children of alcoholics who do not develop alcohol misuse" (p. 589). The authors also report that degree of exposure to parental "alcoholism" was unrelated to later life rates of unemployment, poor physical health, or measures of "adult ego functioning."

A prospective study from Denmark outlined in a previous section is following up a large cohort of children born in Copenhagen in 1959- 1961 which contains 233 sons of "alcoholic" fathers. Knop et al. (1985) studied these young people and compared them with 107 control children. The group of children were 19-20 at the time of this report, and besides the results concerning school behavior reported in an earlier section, data are presented examining these young people's alcohol consumption in the previous week. The authors found that there were no differences between the two groups, with average consumption equalling 17 and 18 units of alcohol (1 unit = 1/4 oz absolute alcohol) in the offspring and control groups, respectively (which is a similar amount to Danish norms for that group), and with 36 and 341, respectively, consuming more than 20 units of alcohol in the preceding week [in the UK, recommended maximum amounts of alcohol in any 1 week are 21 units for a man, 14 units for a woman (HEA, 1989)].

Two further prospective studies are often cited Jones (1968,1971) and Kammeier et al. (1973). Jones studied members of the longitudinal Oakland Growth Study, and Kammeier et al. followed back "alcoholics" in treatment to examine their personality characteristics at the time they were college freshmen. Unluckily, both these pieces of research are concerned with examining premorbid personality traits, and data are not reported concerning either the drinking behavior of the parents or the type of family emotional environment in which these children grew up.

Community Samples

Considering the problems inherent in conducting longitudinal research outlined above, it is not surprising that so few studies of this type have been carried out. What is surprising is that, considering the theoretical and practical interest in this area, so few studies using community samples have been performed.

One of the few is by Benson (1980; Barnes et al., 1978). She screened women employed by an American university and 1,145 women enrolled in undergraduate psychology classes in the same university. From this she created a sample of 129 daughters of "alcoholic" fathers, and a sample of 111 daughters of non-alcoholic fathers to act as a control group, split into a

group of 30 with “psychiatrically disturbed fathers” and a group of 81 with fathers with neither alcohol or psychiatric problems. She compared these three groups and found that there were no differences in alcohol consumption, but that daughters of both the “problem parent” groups showed a higher level of “neurotic symptomatology” and “acting out” than did the comparison group. She further found that very little of the variance in outcome was related to the existence of a parent with a drinking problem per se, finding instead that family climate and social support were more important influences on daughters’ adjustment than was a father’s history of alcohol problems or psychiatric difficulties. There were problems with this study, however: Benson utilized only women (although this is a refreshing difference from the usual sex bias to males), and only college level respondents, and so it is unclear as to how her results might generalize to the overall population. There is also the possibility, raised by the author herself, that this sample, by having attained a college level of education, “may have already succeeded to some extent in overcoming the effects of parental alcoholism. Thus (the) sample may be more representative of a subgroup of less vulnerable daughters of ‘coping successes’ than of all daughters of alcoholic fathers” (Barnes et al., 1978, p. 220).

A second study using a community, volunteer sample is that by Clair and Genest (1987). These researchers compared 30 young people with an “alcoholic father and nonalcoholic mother” with 40 young people who had neither parent with an alcohol problem. All 70 subjects were between 18 and 23 years of age. The “offspring” group was recruited via a variety of methods - the local University subject pool of undergraduates, “newspaper and poster advertising at the University of Saskatchewan, at a local institute of applied arts and technology, and throughout the community, as well as through contact persons at Alcoholics Anonymous and Al-Anon” (p. 347). The comparison group was obtained from the University subject- pool of undergraduates.

The authors hypothesized that any ill-effects of having a problem-drinking parent would be mediated via one of a number of mediating variables, and they examined three- the quality of the family environment during adolescence, the quality and quantity of social support available during adolescence, and the range of coping behaviors exhibited by the child. Clair and Genest report that the children of problem drinkers had less cohesive, more conflict-ridden family environments, that they received less informational support but similar emotional support, and that they tended to see their family situations as less controllable than the comparison groups. When they examined their respondents’ adult adjustment, they found that their offspring sample was slightly more “prone to depression,” but that there were no significant differences on scores of social self-esteem, general maladjustment, and total self-esteem (although the offspring group had a slightly higher range of scores). They also found that self-esteem was related to the degree to which the family maintained cohesion; and that depression-proneness was related to the degree to which the family failed to encourage assertiveness and self-sufficiency, and the degree to which they did not provide informational support to their offspring.

This study is marred by a large number of problems. The sample size is too small to allow for any confident generalization of the results; the criteria for assigning a parent to the “alcoholic” group are not given; the study specifically excluded any respondent who reported a mother with a drinking problem; there is a great overrepresentation of females to males (28/30 in the offspring group, 34/40 in the comparison group); different procedures were used to recruit the two groups; the comparison group were all undergraduates, and all from the university subject pool; respondents with severe maladjustment were excluded, hence biasing the results toward finding no differences in adult adjustment; the research was highly

questionnaire oriented, with some respondents never being interviewed at all; there were very few adulthood outcome measures-just depression and self-esteem meaning that highly pertinent variables such as the respondents drinking and relationship formation were excluded, and few demographic variables were included in the analysis, with such primary variables as sex and socioeconomic status being excluded. It is, however, one of the very few studies which has attempted to examine, in a sample drawn from the community rather than the clinic, the adjustment of young adults who report having had a problem drinking parent.

A third study using a community sample is that by Parker and Harford (1987). They used data from an interview study of a representative sample of over 1,100 employed men and women aged over 18 who lived in metropolitan Detroit. They divided their sample into five categories of drinker: nondrinkers, drinkers who were both nondependent *and* had no drink-related problems, drinkers who had drink-related problems (e.g., drink-related job disruption, belligerence, social reactions and consequences-accidents, legal or financial problems) but no dependence, drinkers who were dependent (e.g., withdrawal symptoms, loss of control, behavior symptomatic of episodes of intoxication) but has no drink-related problems, and drinkers with *both* dependence and problems, and then related the four drinker categories (i.e., excluding the nondrinker from the analysis) to the respondents descriptions of their parents drinking status: nondrinker, light drinker, moderate drinker, heavy drinker, or very heavy drinker.

This study found that 17% (N = 13 out of 76) of the men with heavier drinking parents were dependent drinkers with drink-related problems-i.e., the most serious category - whereas only 6% (N = 22 out of 373) of the men with lighter drinking parents were in this category. The figures for women show that 9% (N = 9 out of 103) with heavier drinking parents were dependent drinkers with drink-related problems, whereas only 2% (8 out of 414) with lighter drinking parents were in this category. The data reported also show that for men there is no rise in the likelihood of being categorized "dependent without drink-related problems" or "nondependent with drink-related problems" on the basis of the heaviness or not of reported parental drinking, whereas for women, reporting a heavier drinking parent does seem to be related to both an increased likelihood of being categorized "dependent without drink-related problems" (8% vs 4%) and a *decreased* likelihood of being categorized "nondependent with drink-related problems" (2% vs 6%).

There are problems with this study as well - the percentages in all the categories are very low (other than for males with heavy drinking parents who are now categorized as "dependent drinkers with drink-related problems"); no statistical analyses are presented examining the relationships reported above (although the paper also examines the effects of socioeconomic status on these categorizations, and statistical analyses are presented for the interactions between socioeconomic status, drinking status, and parental drinking category); the methods of ascertaining parental drinking status are extremely loose and were not subject to any checks or clarifications; the timespans during when the parent might have been a heavy drinker were not specified; the relationship between "heavy" drinking in this study and "problem drinking" or "alcoholism" in other studies is not explicated; and no other measures of adulthood adjustment were included besides current drinking and drink-related problems.

On the other hand, this is a study utilizing a large sample; it examines both men and women; it does not study selected populations of students; and it does include socioeconomic status variables in its analyses.

It may be thought that this study provides data which contradict Benson's findings, reviewed above, but this is not the case. Benson reported that there were no differences in levels of alcohol consumption on the basis of fathers drinking category, whereas Parker and Word reported on their respondents drink-related problems and their symptoms of dependence; consumption has not been reported.

A further study using a community sample is also reported by Parker and Harford (1988). In this study the authors reanalyze data from a national survey of drinking practices by adults in the United States. The sample consisted of 1,772 adults (762 men and 1,010 women) with a mean age of 45 for the men and 44 for the women. Parker and Harford show that, once sociodemographic characteristics are controlled for, having an alcohol-misusing parent places sons at risk for dependent problem drinking (13% of men with alcohol-misusing parents are classified as dependent problem drinkers vs 4% of men without such parents), both sons and daughters are at risk for divorce or separation (11% of men with alcohol-misusing parents are classified as having disrupted marriages vs 6% of men without such parenting, and 15% of women with alcohol-misusing parents vs 8% of women without such parenting), and daughters are at risk for depressive symptomatology (28% of women having alcohol-misusing parents score 16 or more on the Centre for Epidemiological Studies Depression Scale vs 17% of women without such parenting). When a regression analysis is performed on these variables, controlling for age, education, family income, and race, all the above results reach statistical significance at the $p .05$ level. As with the previous Parker and Harford paper reviewed above, alcohol consumption was not reported in this paper.

A final study using a community sample is reported by Velleman and Orford (1990; Orford and Velleman, 1990). They examined, via detailed semi-structured interviewing, both alcohol and other drug-taking, and a range of non-alcohol related adult adjustment factors, in a sample of 170 offspring of problem drinkers and 80 comparison young people of similar ages, sex, sources, and socioeconomic statuses. Their ages ranged from 16 to 35, about half were from each sex, and all socioeconomic statuses were represented. No between-group differences between offspring and comparisons were found in terms of current quantity of alcohol consumption, nor in percentages who had ever used or were currently using either illicit or prescribed drugs. Some support, however, was found for the detrimental effect of having two parents with drinking problems, and of having a problem drinking parent who drank at home. The research also examined the issue of whether the sex of the parent with the drinking problem altered the effect on the offspring drinking, an issue which Miller and Jang examined and which was commented upon above. Table 1 also shows results from the Velleman and Orford study, and it can be seen that these data present a very different picture from the Miller and Jang results: although a wider definition of drinking outcome is used [risky drinking being defined as having three or more out of eight variables including drinking more than 30 units (males) or 20 units (females) in the last week, drinking more than these amounts on one occasion within the last year, describing self as a heavy or problem drinker, drinking on a daily basis, and admitting to four or more of 22 alcohol-related problems], the risks of a negative outcome are lower in all categories than in the Miller and Jang table, and there is especially no particular detrimental effect on daughters of having a problem drinking mother.

The Velleman and Orford research also examined a range of non-alcohol-related outcomes - self-esteem, personality, life satisfaction, social life, relationships - and found again that there were few between-group differences, once family disharmony was controlled for.

One noticeable element in these community sample reports is the paucity of results presented concerning outcomes which are not related to the offspring's drinking. Clearly, outcome in terms of respondents drinking behavior is important in order to assess intergenerational transmission issues, but equally important is outcome in terms of other adulthood adjustment issues-self-esteem, relationships, etc. Blane (1988) asserts that "nonalcoholic outcomes in COA (children of alcoholics) . . . have been the subject of a great deal of research" (p. 797), but this is not borne out by the published research on the adult adjustment of these children, other than the commonly mentioned "folk wisdom" concerning the propensity of daughters of alcoholics to become depressed and/or to marry alcoholics in turn. It should be stressed that there is some evidence to support at least the "propensity for depression" hypothesis (e.g., Parker and Word, 1988) above, but overall the lack of nondrinking adulthood outcome research, with the exception of the Velleman and Orford research summarised above, means that it is not even clear what variables are the important ones justifying further research effort.

Adult Adjustment of Children of Problem Drinking Parents: A Summary

In summary, the body of the evidence reviewed above suggest two things:

- a) There is a great deal of evidence suggesting that the children of problem drinkers are at higher risk than are the children of non-problem drinking parents of developing a number of childhood problems and disorders.
- b) The evidence suggesting problematic adulthood adjustment is more equivocal.
 - (i) As far as adulthood drinking status is concerned, the evidence from retrospective studies of current problem drinkers, and from prospective studies of *children* selected due to their current problem status, certainly suggests that there are strong intergenerational continuities at work Yet the evidence from community samples and from prospective studies following up problem-free children suggests that this risk may be exaggerated.
 - (ii) As far as adulthood adjustment other than drinking is concerned, there is remarkably little which is known about this, but what is known tends to mirror the evidence for drinking status - i.e. the adjustment found depends upon the source of the sample.

The conclusion, then, in terms of the adulthood adjustment of the children of problem drinkers, is that the outcome depends to a great extent upon the sampling. Adults with alcohol problems report problematic childhoods and a greater likelihood of having a problem drinking parent; and problem children with alcohol misusing parents are more likely to develop problematic adulthoods involving alcohol misuse. Yet adults with alcohol misusing parents recruited from community sources, although they report problematic childhoods, do not report very different adulthood adjustments (concerning drinking or other outcomes) than do comparison respondents; and children with problem drinking parents but without current problems, when followed up to adulthood, again do not report worse outcomes than do comparisons.

D. WHY MIGHT HAVING A PROBLEM DRINKING PARENT LEAD TO DIFFICULTIES? MEDIATING VARIABLES

Three of the community studies reviewed above (Benson, 1980; Clair and Genest, 1987; Orford and Velleman, 1990), and the prospective studies of children for whom there was no reason to think that they were at risk, reviewed prior to the community studies, raise the possibility that at least some of the commonly found intergenerational problems are a function of sampling artefacts. If it is the *case* that retrospective studies of current problem drinkers and prospective studies of already identified problem children show strong intergenerational continuities between parental and offspring drinking patterns, and that prospective studies of non-problem children and community samples of adult offspring of problem drinkers do not show this continuity (or at least do not regularly show it), then this implies that one group or the other (perhaps both) are providing biased data.

Nevertheless, the fact remain.. that large numbers of studies of children show short-term effects of parental alcohol misuse, and large numbers of retrospective accounts of current problem drinkers show some intergenerational continuity. This section will therefore attempt to examine possible reasons for these effects.

There are a number of possible mechanisms whereby alcohol (and other) problem might be transmitted from one generation to the next within families (Orford, 1982). For the sake of simplicity these can be reduced to the following three models:

i) A *genetic* mechanism. The former, exclusively environmental bias of the research literature has been extensively questioned in the last 10 years, and a large literature has now been produced on the children of problem drinkers which implies that some genetic mechanism exists which is partially responsible for the intergenerational transmission of alcohol problems (for example, the work by Goodwin and various of his colleagues on adoption – Goodwin et al., 1973, 1974; Goodwin, 1984; and the work by Clifford and colleagues on twins - Clifford et al., 1984). These studies [although some of them are contradictory, as Murray and Stabenau (1982) point out] have given rise to a large body of research which is currently investigating the nature of these genetic differences; and reports are appearing of differences in psychophysiological responses to alcohol between young people with and without family histories of drinking problems (e.g., Tarter et al., 1984; Schaeffer et al., 1984; Schuckit et al., 1981; Schuckit, 1984). Nevertheless, partially because genetic researchers themselves accept that "clearly environmental influences play a large role" (Clifford et al., 1984, p. 78), and partly because this review is concerned with an examination of environmental rather than genetic hypotheses connected with intergenerational transmission, this genetic hypothesis will not be examined here in any further detail.

ii) A *specific environmental* mechanism. This hypothesis is that the process of transmission of alcohol problems has specifically to do with what the child learned, or failed to learn, from the parent(s). One variety of this hypothesis is that the child positively identifies with a parent who presents a model of excessive or harmful drinking. Another is that no-one in the family offers the child a satisfactory model of non-deviant moderate drinking. A third is that the child develops ambivalent, and hence unstable, attitudes toward drinking. Hypotheses such as these might explain why children might develop alcohol problems once they grow to adulthood, but they cannot account for the high incidence of emotional and behavioral difficulties shown by offspring while still children, nor can they account for the finding of non-alcohol-related problems in adult offspring of problem drinking parents.

iii) A *general environmental* mechanism. The hypothesis here is that problems are transmitted via factors which are not specific to f d e s where one or both parent(s) drinks

excessively. There is, for example, some evidence that it is particularly in those families where violence has occurred in conjunction with a parental drinking problem, or where family discord is greatest, that children are most at risk of suffering harmful effects while they are still children (Velleman and Orford, 1984, 1990). It is possible that the same factors may help to distinguish those children who experience adulthood problems from those children who survive into adulthood without such problems. It may be that parental drinking problems have repercussions for children, if and when they do, not through any specific mechanism to do with alcohol and its use, but because such problems are associated with family disorder. If this hypothesis were to be the case, there would not be expected to be very much difference in effect between children with, say, violent parents and children with both drinking and violent parents. What is surprising is that this issue has not been adequately examined. Raising this query about a possible general environmental mechanism, however, provides a bridge between the specific research literature on alcohol problems in the family and the much larger literature on family discord and disruption generally (e.g., Rutter and Madge, 1976; Emery, 1982), which the next paper in this series will examine.

What is not clear, however, is what variables ought to be examined. That is, given a general environmental mechanism, which variables might be the ones responsible for intergenerational transmission.

Mediating Variables: Evidence from Research on Children

There are a number of interrelated major variables to which researchers have called attention. The first is violence. Booz-Allen and Hamilton (1974) found that physical violence in families with a problem drinking parent created more serious problems for the children than did the drinking. Keane and Roche (1974) found that children of both sexes suffered a far greater number of developmental problems if their fathers were violent as well as alcoholic as opposed to being nonviolent alcoholics or controls. Wilson and Orford (1978) found that parental violence had an impact on children even if it was not directed toward them. Reich et al. (1988) in a recent study show that the families of problem drinkers are characterized by considerably more physical and emotional misuse than are the families of their comparison group. None of these studies, however, adequately controls for the presence of violence *without* there also being an alcohol problem.

The second variable follows on from this: even if there is no physical violence, there is often marital conflict of one form or another, and this has been shown to be highly important. Cork (1969), in her study of the children of problem drinkers in treatment in Canada, found that 85% of all the children she interviewed ($N = 115$) said that their major cause of concern was not parental drinking, or even parental drunkenness, but parental arguing. Booz-Allen and Hamilton (1974) argued that marital conflict was an important mediator of the impact of parental drinking on children. And Swiecicki (1969) found that “the lack of friendly atmosphere” p. 7) within the family was an important factor for the children.

Not surprisingly, these marriages often end in separation and divorce - 31% of Swiecicki's sample of 100 families were broken by divorce, which was three times the percentage for his control group, and this is by no means an uncommon situation. For example, Drake and Vaillant (1988) show that 43% of their 127 respondents with “parental alcoholism” experienced parental separation as opposed to 20% of their 282 respondents without such “parental alcoholism.” In many cases such parental separation leads to “parental loss” where the child loses contact almost completely with one of his or her parents.

The violence, marital conflict, and parental loss together create an unpredictable background for a child, and this ties in with the final major variable: inconsistency and ambivalence in parenting, with many writers (e.g., Newell, 1950) focusing on the unpredictability of the drinking parent who is sometimes warm or affectionate or charming, and (unpredictably) sometimes indifferent or violent.

These major variables have certain ramifications for children, as Wilson (1980) points out: parent-child relationships can suffer, self-esteem can diminish, and children may increasingly have to take on an adult role of peacemaker (Wilson and Orford, 1978) or of parent (Cork, 1969). They may become increasingly socially isolated, they often feel left out and excluded, and they are offered very little counselling on how to cope with their own problems or their parents' ones.

Mediating Variables: Evidence from Adult Studies

Many of these variables appear again in studies which look at the family backgrounds of now-adult problem drinkers. Respondents with drinking problems, when compared with control subjects, report much higher levels of parental conflict (McCord and McCord, 1959a; Aamark, 1951), parental loss (Bleuler, 1955; Brajsa, 1968; Moore and Rarnseur, 1960, Wahl, 1956), and parental inconsistency (McCord and McCord, 1959a; Bleuler, 1955). In all of these studies the figures for parental alcoholism (when they were reported) ranged from 26 to 57%, but unluckily no intercorrelations were reported for the relationships between these parental alcoholism figures and the other figures for parental loss, parental conflict, etc. Hence, from these studies it is not known how often young problem drinkers had *both* parental alcoholism *and* family relationship problems, and how often they had one *or* the other.

All these data imply a correlation between the quality of the home environment and both childhood difficulties and later adulthood alcohol misuse. As outlined in the previous section of this review, few studies have examined the issue of the adulthood adjustment of the children of problem drinkers other than by looking at drinking behavior, but Clair and Genest's study, and that by Velleman and Orford, both described above, imply also that family environment and support are strong moderators in deciding whether or not negative adult adjustments unrelated to drinking behavior occur in the offspring of problem drinkers.

There are two major problems with this "disturbed family relations" theory. The first is that almost all of the data which support it concerning problematic adult adjustment comes from adults who have themselves developed alcohol problems; and the second is that information on adulthood adjustment which is not drinking related is very sparse. It may indeed be true that the causes of the intergenerational transmission of alcohol problems lie within a mixture of family environmental factors such as uncohesive parental relationships leading to less than ideal parenting (which may mean being ambivalent, or setting bad models, or being too rigid, or too soft); or parental withdrawal from their children, resulting in the child becoming increasingly deviant, with alcohol misuse being one outcome of this deviant pathway. It may equally be true that individuals who have one or both parents as alcohol misusers may be more likely to copy the model of drinking alcohol as a method of coping with problems, ensuring that they do more often end up repeating an alcohol-misusing pattern. And it may also be true that certain as yet unexplained genetic factors may increase the likelihood that such an outcome will occur.

Yet it may equally be the case that there are large numbers of children who have similar upbringings - problem drinking parents who reject them, etc.- but who grow into adulthood with no ill effects. There exists only minimal information as to whether or not children from this environment can grow up to be stable, secure individuals; and there exists only minimal information as to what problems in adulthood adjustment, other than alcohol dependency, these children might later develop.

To say that information is minimal is not meant to imply that no information exists. In fact, the idea that many children grow up without obvious harmful aftereffects is often shown in the literature, although it is rarely made explicit. For example, Cotton (1979) in her review of 39 studies of intergenerational transmission of alcohol problems showed (p. 103) that, in a varied sample of 788 control subjects who were general hospital patients, and who were non-alcoholic and non-psychiatrically disturbed, the rate of paternal alcoholism was 5.2%. This shows quite clearly that in a sample of individuals who are not selected because of their problem drinking or psychiatric status, a relatively large proportion will report a parental drinking problem, implying that quite large numbers of the children of problem drinkers do in fact go on to become stable adults (at least in terms of their lack of current psychiatric diagnosis).

One of the researchers who disagrees with the general environmental hypothesis is Vaillant. He argues primarily (Beardslee and Vaillant, 1984; Vaillant, 1980; Vaillant and Milofsky, 1982; Vaillant, 1983) that the commonly discussed hypothesis of a pre-alcoholic personality is not found in reality when prospective data are used: "The etiological hypotheses that view alcoholism primarily as a symptom of psychological instability may be illusions based on retrospective study" (Vaillant and Milofsky, 1982, p. 494). He further argues - using data from his 30-year prospective study of "socially privileged, non-delinquent college men" - that unstable childhoods ("broken homes, irresponsible fathers, marital discord, and inconsistent upbringings" - Vaillant, 1983, p. 71) do not predict later alcoholism, although they do predict later regular use of prescribed medication and of mind-altering drugs.

SUMMARY AND CONCLUSIONS

The conclusions of this review so far are fourfold.

- a) There is a great deal of evidence suggesting that the children of problem drinkers are at higher risk than are the children of nonproblem drinking parents of developing a number of childhood problems and disorders.
- b) The evidence suggesting problematic adulthood adjustment is more equivocal. As far as adulthood drinking status is concerned, the evidence from retrospective studies of current problem drinkers, and from prospective studies of children selected due to their current status, certainly suggests that there are strong intergenerational continuities at work. Yet the evidence from community samples and from prospective studies following up problem-free children suggests that this risk may be exaggerated. As far as adulthood adjustment other than drinking is concerned, there is remarkably little which is known about this, but what is known tends to mirror the evidence for drinking status - i.e. the adjustment found depends upon the source of the sample.
- c) There are a variety of biases within the literature, the most striking of which is the sex bias: the preponderance of research which concentrates upon problem drinking fathers, and the intergenerational effects on their sons.

- d) There are a variety of possible mechanisms which might be responsible for the problematic childhood (and adulthood, when it is found) adjustment. The mechanism most favored by the majority of writers is the general environmental one, which suggests that any ill effects which are found are attributable to disturbed family relationships.

Two areas of unclarity remain. First, too little is known about adulthood outcomes which are not alcohol-related: it is unclear how much negative adulthood adjustment in nondrinking areas there actually is, and even which areas are the most promising areas for further research. Second, it is unclear as to which would be the best method of distinguishing between outcomes attributable to having a problem drinking parent or those attributable to having an environment which contained high levels of parental and family disharmony. These two areas will be returned to in the concluding section of the following paper in this series, which will, however, first examine a selection of the wider literature on intergenerational transmission.

REFERENCES

- AAMARK, C. (1951). A study in alcoholism - Clinical, social, psychiatric and genetic investigations. *Acta Psychiatr. Scand, Suppl 70*
- AITKEN, P. (1979). *Ten-to-Fourteen-Year-Olds and Alcohol*. Edinburgh: HMSO.
- BAEKELAND, P., LUNDWALL, L., and KISSIN, B. (1975). Methods for the treatment of chronic alcoholism: A critical appraisal. In R. Gibbons, Y. Israel, H. Kalant, R. Popham, W. Schmidt, and R. Smart (eds.), *Research Advances in Alcohol and Drug Problems*, Volume 2. New York: Wiley.
- BALTES, P. (1968). Longitudinal and cross-sectional sequences in the study of age and generation effects. *Hum. Dev.* 11: 145-171.
- BARNES, J., BENSON, C., and WILSNACK, S. (1978). Psychosocial characteristics of women with alcoholic fathers. In M. Galanter (ed.), *Currents in Alcoholism*, Vol. VI, pp. 209-222.
- BEARDSLEE, W., SON, L., and VAILLANT, G. (1986). Exposure to parental alcoholism during childhood and outcome in adulthood: a prospective longitudinal study. *Br. J. Psychiatry*, 149: 584-591.
- BEARDSLEE, W., and VAILLANT, G. (1984). A prospective study of alcoholic and psychopathologic outcome: a case study. *J. Studies Alcohol*, 45: 500-503.
- BENSON, C. (1980). *Coping and Support among Daughters of Alcoholics*. Unpublished PhD Thesis. Indiana University.
- BERRY, J. (1967). *Antecedents of Schizophrenia, Impulsive Character and Alcoholism in Males*. Unpublished PhD Thesis. Columbia University
- BLANE, H. (1988). Prevention issues with children of alcoholics. *Br. J. Addict.* 83: 793-798.
- BLEULER, M. (1955). Familial and personal background of chronic alcoholics. In O. Diethelm (ed.), *Etiology of Chronic Alcoholism*. Springfield, Illinois: Thomas, pp. 110-166.
- BOOZ-ALLEN AND HAMILTON, INC. (1974). *An Assessment of the Needs and Resources for Children of Alcoholic Parents*. Report No. PB-241-119, prepared for the US NIAAA.
- BRAJSA, P. (1968). Obiteljska patologija kod lwnicnih alkoholicara (Family pathology in chronic alcoholics). *Alkoholizam, Beograd* 8(2/3): 32-49 (CAAAL No. 14470).
- CAHALAN, D. (1970). *Problem Drinkers: A N a r i o ~ S l u r v e y*. San Francisco: Jossey Bass.
- CLAIR, D., and GENEST, M. (1987). Variables associated with the adjustment of offspring of alcoholic fathers. *J. Stud Alcohol* 48: 345-355.

- CLIFFORD, C., HOPPER, J., FULKER, D., and MURRAY, R. (1984). A genetic and environmental analysis of a twin family study of alcohol use, anxiety and depression. *Genet. Epidemiol.* 1: 63-79.
- CORK, M. (1990). *The Forgotten Children: A Study of Children with Alcoholic Parents*. Toronto: Alcoholism and Drug Research Foundation of Ontario.
- COTTON, N. (1979). The familial incidence of alcoholism: A review. *J. Stud Alcohol* 40:89-116.
- COWEN, E., PEDERSON, A., BABIGIAN, H., IZZO, L., and TROST, M. (1973). Long-term follow-up of early detected vulnerable child. *J. Consult. Clin Psychol*, 41: 438-446.
- DAVIES, J., and STACEY, B. (1972). *Teenagers and Alcohol*. London: HMSO.
- DRAKE, R., and VAILLANT, G. (1988). Predicting alcoholism and personality disorder in a 33-year longitudinal study of children of alcoholics. *Br. J. Addict.* 83: 799-807.
- EL-GUEBALY, N., and OFFORD, D. (1977). The offspring of alcoholics: A critical review. *Am J. Psychiatry* 134: 357-365.
- EL-GUEBALY, N., and OFFORD, D. (1979). On being the offspring of an alcoholic: An update. *Alcoholism: Clin. Experimental Res.* 3: 148-157.
- EMERY, R. (1982). Inter-parental conflict and the children of discord and divorce. *Psychol. Bull.* 92: 310-330.
- GOODWIN, D. (1984). Studies of familial alcoholism: A review. *J. Clin Psychiatry* 45: 14-17.
- GOODWIN, D., SCHULSINGER, F., HERMANSEN, L., GUZE, S., and WINOKUR, G. (1973). Alcohol problems in adoptees raised apart from alcoholic biological parents. *Arch. Gen Psychiatry*, 28: 238-243.
- GOODWIN, D., SCHULSINGER, P., MOLLER, N., HERMANSEN, L., WINOKUR, G., and GUZE, S. (1974). Drinking problems in adopted and non-adopted sons of alcoholics. *Arch. Gen Psychiatry*, 31: 164-169.
- HELGASON, T., and ASMUNDSSON, G. (1975). Behaviour and social characteristics of young asocial alcohol misusers. *Neuropsychobiology* 1/2: 109-120.
- HEA (1989). *That's the Limit-A Guide to Sensible Drinking*. London: Health Education Authority.
- HELLER, K., SHER, K., and BENSON, C. (1982). Problems associated with risk overprediction in studies of offspring of alcoholics: Implications for prevention. *Clin Psychol Rev.* 2: 183-200.
- JONES, K., and SMITH, D. (1973). Recognition of the fetal alcohol syndrome in early infancy. *Lancet* 2: 999-1001.
- JONES, M. (1968). Personality correlates and antecedents of drinking patterns in adult males. *J. Consult. Clin Psychol.* 32: 2-12.
- JONES, M. (1971). Personality antecedents and correlates of drinking patterns in women. *J. Consult. Clin Psychol*, 36, 61-69.
- KAMMEIER, M., HOFFMAN, H., and LOPER, R. (1973). Personality characteristics of alcoholics as college freshmen and at time of treatment. *Q. J. Stud Alcohol* 34 390-399.
- KATTAN, L., et al. (1973). Characteristics of alcoholism in women and evaluation of its treatment in Chile. *Acta Psiquiatr. PsicoL Am. Lat.* 19: 194-204 (in Spanish).
- KEAN, A., and ROCH, D. (1974). Developmental disorders in the children of male alcoholics. In *Proceedings of the 20th International Institute on Prevention and Treatment of Alcoholism*. Lausanne: International Council on Alcoholism and Addictions.

- KNOP, J., TEASDALE, T., SCHULSINGER, F., and GOODWIN, D. (1985). A prospective study of young men at risk for alcoholism: School behavior and achievement. *J. Stud Alcohol*, 46: 273-278.
- LASZLO, C. (1970). The internalization of deviant behavior patterns during socialization in the family. *Demografia* 13: 386-393 (in Hungarian).
- McCORD, J. (1972). Etiological factors in alcoholism: Family and personality characteristics. *Q. J. Stud Alcohol* 33: 1020-1027.
- McCORD, W., and McCORD, J., with GUDEMAN, J. (1959). Some current theories of alcoholism: A longitudinal evaluation. *Q. J. Stud Alcohol* 20: 729-749.
- McCORD, W., and McCORD, J., with ZOLA, I. (1959b). *The Origins of Crime*. New York: Stanford University Press.
- McCORD, W., and McCORD, J., with GUDEMAN, J. (1960). *The Origins of Alcoholism*. Stanford, California: Stanford University Press.
- McCORD, W., and McCORD, J. (1962). A longitudinal study of the personality of alcoholics. In D. Pittman and C. Snyder (eds.), *Society, Culture, and Drinking Patterns*. New York: Wiley, pp. 413-430.
- McKENNA, T., and PICKENS, R. (1981). Alcoholic children of alcoholics. *J. Stud Alcohol* 42: 1021-1029.
- MIJLEX, D., and JANG, M. (1977). Children of alcoholics: A 20-year longitudinal study. *Soc. Work Res. Abstr.* 13: 23-29.
- MILLER, S., and TUCHFELD, B. (1986). Adult children of alcoholics. *Hosp. Community Psychiatry* 37(3): 235-236.
- MOORE, R., and RAMSEUR, F. (1960). A study of the background of 100 hospitalized veterans with alcoholism. *Q. J. Stud Alcohol* 21: 51-67.
- MURRAY, R., and STAEFNAU, J. (1982). Genetic factors in alcoholism predisposition. In E. Pattison and E. Kaufman (eds.), *Encyclopedic Handbook of Alcoholism*. New York: Gardner Press.
- NEWELL, N. (1950). Alcoholism and the father image. *Q. J. Stud Alcohol* 11: 92-96.
- NIVEN, R. (1984). Children of alcoholics: An interview with the NIAAA Director. *Alcohol Health Res. World* 8(4): 3-5.
- NYLANDER, I. (1960). Children of alcoholic fathers. *Acta Paediatr. Scand, Suppl.* 121.
- NYLANDER, I. (1979). A 20-year prospective follow-up study of 2164 cases at the child guidance clinics in Stockholm. *Acta Paediatr. Scand. Suppl.* 276.
- NYLANDER, I., and RYDELINS, P. (1982). A comparison between children of alcoholic fathers from excellent versus poor social conditions. *Acta Paediatr. Scand.* 71: 809-813.
- ORFORD, J. (1982). The prevention of drinking problems in the family. In J. Orford and J. Harwin (eds.), *Alcohol and the Family*. London: Croom Helm.
- ORFORD, J. (1990). Alcohol and the family: An international review of the literature with implications for research and practice. In L. Kozlowski, H. Annis, H. Cappell, et al. (eds.), *Research Advances in Alcohol and Drug Problems*, Vol. 10. New York: Plenum.
- ORFORD, J., and VELLEMAN, R. (1990). Offspring of parents with drinking problems: Drinking and drug-taking as young adults. *Br. J. Addict.* 85: 779-794.
- PARKER, D., and HARFORD, T. (1987). Alcohol-related problems of children of heavy drinking parents. *J. Stud Alcohol* 48: 265-268.
- PARKER, D., and HARFORD, T. (1988). Alcohol-related problems, marital disruption and depressive symptoms among adult children of alcohol misusers in the United States. *J. Stud Alcohol* 49: 306-313.
- PASCHEWKOV, S. (1976). Specificity of familial forms of alcoholism. *Sov. Med.* 11: 76-79 (in Russian).

- PENICK, E., POWELL, B., BINBHAM, S., LISKOW, B., MILLER, N., and READ, M. (1987). A comparative study of familial alcoholism *J. Stud Alcohol* 48: 136-146.
- POWERS, E., and WITMER, H. (1951). *The Prevention of Delinquency*. New York Columbia University Press.
- RATHOD, N., and THOMSON, I. (1971). Women alcoholics: A clinical study. *Q. J. Stud Alcohol* 32: 45-52.
- REICH, W., EARLS, P., and POWELL, J. (1988). A comparison of the home and social environments of children of alcoholic and non-alcoholic parents. *Br. J. Addict.* 83: 831-839.
- REICH, T., WINOKUR, G., and MULLANEY, J. (1975). The transmission of alcoholism. In R. Fieve, D. Renthall, and H. Brill (eds.), *Genetic Research in Psychiatry*. Baltimore: John Hopkins University Press, pp. 259-271.
- RICKS, D., and BERRY, J. (1970). Family and symptom patterns that precede schizophrenia. In M. Roff and D. Rich (eds.), *Life History Research in Psychopathology*. Minneapolis: University of Minnesota Press.
- ROBINS, L. (1966). *Deviant Children Grown Up*. Baltimore: Williams and Wilkins.
- ROBINS, L., BATES, W., and O'NEIL, P. (1962). Adult drinking patterns of former problem children. In D. Pitman and C. Snyder (eds.), *Society, Culture, and Drinking Patterns*. New York Wiley, pp. 395-412.
- ROSETT, H., and WEINER, L. (1982). Effects of alcohol on the fetus. In E. Pattison and E. Kaufman (eds.), *Encyclopedic Handbook of Alcoholism*. New York Gardner Press.
- RUSSELL, M., HENDERSON, C., and BLUME, S. (1985). *Children of Alcoholics: A Review of the Literature*. New York Children of Alcoholics Foundation.
- RUTTER, M., and MADGE, N. (1976). *Cycles of Disadvantage: A Review of Research*. London: Heinmann.
- RYDELIUS, P. (1981). Children of alcoholic fathers: Their social adjustment and their health status over 20 years. *Acta Paediatr. Scand, Suppl.* 286.
- SCHAFFER, K., PARSONS, O., and YOHMAN, J. (1984). Neuropsychological differences between male familial and nonfamilial alcoholics and nonalcoholics. *Alcoholism: Clin. Exp. Res.* 8: 347-351.
- SCHUCKIT, M. (1984). Subjective responses to alcohol in sons of alcoholics and controls. *Arch. Gen. Psychiatry* 41: 879-887.
- SCHUCKIT, M., ENGSTROM, D., ALPERT, R., and DUBY, J. (1981). Differences in muscle-tension response to ethanol in young men with and without family histories of alcoholism *J. Stud Alcohol* 42: 918-922.
- SWIECICKI, A. (1969). Adult adjustment of children from alcoholic and nonalcoholic families: A 10-year follow-up study. *Probl. Alizmu, Warsaw* 17(2): 1-7 (CAAAL No. 14047) (in Polish).
- TARTER, R., HEGEDUS, A., GOLDSTEIN, G., SHELLY, C., and ALTERMAN, A. (1984). Adolescent sons of alcoholics: Neuropsychological and personality characteristics. *Alcoholism: Clin & Exp. Res.* 8: 216-222.
- VAILLANT, G. (1980). Natural history of male psychological health: VIII antecedents of alcoholism and 'orality'. *Am. J. Psychiatry* 137: 181-186.
- VAILLANT, G. (1983). *The Natural History of Alcoholism*. Cambridge, Massachusetts: Harvard University Press.
- VAILLANT, G., and MILOFSKY, E. (1982). The etiology of alcoholism: A prospective viewpoint. *Am. Psychol.* 37: 494-503.
- VELLEMAN, R., and ORFORD, J. (1984). Intergenerational transmission of alcohol problems - Hypotheses to be tested. In N. Krasner, J. Madden, and R. Walker (eds.) *Alcohol Related Problems*. London: Wiley, pp. 97-113.

- VELUM, R., and ORFORD, J. (1990). Young adult offspring of parents with drinking problems: Recollections of parents' drinking and its immediate effects. *Br. J. Clin. Psychol.* 29: 297-317.
- WAHL, C. (1956). Some antecedent factors in the family histories of 109 alcoholics. *Q. J. Stud Alcohol* 17: 643-654.
- WALL, W., and WILLIAMS, H. (1970). *Longitudinal Studies and the Social Sciences*. London: Heinemann.
- WARNER, R., and ROSETT, H. (1975). The effects of drinking on offspring: An historical survey of the American and British literature. *J. Stud Alcohol* 36 1395-1420.
- WEST, M., and PRINZ, R. (1987). Parental alcoholism and childhood psychopathology. *Psychol. Bull.* 102: 204-218.
- WILSON, C. (1980). The family. In Camberwell Council on Alcoholism (ed.), *Women and Alcohol*. London: Tavistock Press, pp. 101-132.
- WILSON, C. (1982). The impact on children. In J. Orford and J. Harwin (eds.) *Alcohol and the Family*. London: Croom Helm, pp. 151-166.
- WILSON, C., and ORFORD, J. (1978). Children of alcoholics: Report of a preliminary study and comments on the Literature. *Q. J. Stud Alcohol* 39 121-142.
- WINOKUR, G., REICH, T., RIMMER, J., and PITTS, F. (1970). Alcoholism. IIL Diagnosis and familial psychiatric illness in 259 alcoholic probands. *Arch Gen. Psychiatry* 23: 104-111.
- WOODSIDE, M. (1988). Research on children of alcoholics: Past and future. *Er. J. Addicr.* 83: 785-792.

THE AUTHOR

Richard Velleman is Lecturer in Psychology at the University of Bath and Top Grade Clinical Psychologist with the Bath Health District. His main research interests center on alcohol and drug problems, especially the families of people with drug and alcohol problem, the evaluation of services, and the use of volunteer counsellors. Publications include a number of book chapters [in, for example, the *Encyclopedic Handbook on Alcoholism* (1982) and the *Handbook of Counselling in Britain* (1989)] and papers in the *British Journal of Addiction*, the *Journal of Studies on Alcohol*, and the *British Journal of Clinical Psychology*. His book 'Counselling Problem Drinkers: A Practical Approach' is to be published by Sage in the summer of 1992.



Table 1
The Relationship between Parental Drinking Status and Risky or Heavy Drinking in the Offspring

Parents' drinking status	Miller and Jang (1977)		Orford and Velleman (1990)	
Which parent is 'alcoholic' or "problem drinker"	Heavy drinking (a)		Risky drinking (b)	
	Sons	Daughters	Sons	Daughters
Both	54	36	33	29
Mother only	29	57	21	6
Father only	41	24	25	8
Neither	33	17	11 (not divided by sex)	

(a) 'Heavy drinking' : drinking five or more drinks per occasion.

(b) 'Risky drinking' : three out of: drinking 30 or more units (males) or 20 or more units (females) over the last week, same amounts on one occasion, describing self as heavy or problem drinker, drinking daily, drinking these amounts or more over last week on re-interview 1 year later, same amounts on one occasion on re-interview, being negative about own drinking, and admitting to four or more out of 22 alcohol-related problems.